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CANNONVILLE SOIL CONSERVATION NEWS

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

LaGrange, Georgia

March 1936

Loy E. Rast, State Coordinator
C. L. Veatch, Project Manager

Dear Cooperator:

This is the first of a series of brief newsletters that will be sent to you from time to time. The purpose of these letters is to keep you informed as to the progress of the work in the Cannonville Soil Conservation area and to promote the best possible understanding between the Service and the cooperator.

We are anxious to make the Cannonville project a real demonstration in erosion control. We believe that this is your desire too. If we are to achieve this end, we must work together.

The signing of the cooperative agreement is the beginning of your cooperation. This agreement of "Land Use Program" is the plan for conserving the soil on your farm. Furthermore, it provides us with the authority to apply a complete erosion control program. Such a program includes surveying your terrace lines, building terraces, planting tree seedlings on steep and eroded fields, doing pasture improvement work, planting soil-building and erosion-preventing crops, and many other details. Let's work together, then, in the planning of a real constructive erosion control program; and after it is planned, let's do our best to execute it.

Feel free to call upon us anytime you have suggestions to make, or when you want questions answered or assistance in planning your work.

C. L. VEATCH,
Project Manager

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EROSION CONDITIONS IN PROJECT AREA. - - In order that you may have a better understanding of erosion conditions in the project area, we present for your consideration some figures which show soil losses already incurred. These figures are taken from an erosion survey made on 13,363 acres out of the total of 28,975 acres in the project. This survey reveals the following facts:

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Sheet and gully erosion have taken 75 percent or more of the topsoil on 10.7 percent of the area. This means that approximately 3,000 acres have been rendered practically worthless for cultivated crops. Six thousand acres have lost from 50 to 75 percent of the topsoil. Erosion has robbed 7,500 more acres of 25 to 50 percent of the topsoil. Most of this soil has been washed into the Chattahoochee River, and is forever lost to Troup County.

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FACTORS RESPONSIBLE FOR EROSION IN TROUP COUNTY. - - The main factors that have caused soil erosion are:

1. Lands too steep for cultivation have been kept in clean tilled crops such as corn and cotton. Of the 5,000 acres of idle land in the area 56 percent shows that more than half of the topsoil has been washed away. This land was abandoned because it was so badly eroded that it would not produce profitable crops. It is eroded mainly because it is steep land and was planted to cotton and corn year after year. Much of the land now in forest was at one time in cultivation and was abandoned when it became too badly eroded to grow cotton. When the farmer plants clean tilled crops on steep lands year after year, sooner or later he must abandon these fields and turn them back to nature to restore.

2. Vicious land use practices. Lands have been worn out, cast aside, and new lands cleared almost continuously for more than a century. Large areas have been left scarred and devastated as a result of that land use process. The land has been made to give and give and give, without our giving anything to it in return. Fields have been left bare during the winter months. Corn or cotton has been planted on the same fields year after year. Practically no summer or winter legumes have been planted to add nitrogen and humus to the soil. Very little grain has been planted to give the land a rest. Litter has been raked and burned. Woods and sedge fields have been burned indiscriminately. Many fields have been farmed without terraces or with "makeshift" terraces

These and many other factors have contributed to accelerated erosion, and have been responsible for the heavy soil losses.

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METHODS OF CONTROLLING EROSION. - - Although erosion has been very serious in the Cannonville area because of the factors already cited, there are still many acres of relatively fertile soil on which special efforts should be made to prevent further washing and preserve its present fertility. Soil erosion can be materially controlled if you farmers of the project area will adopt the following well rounded erosion control program.

1. Learn to appreciate that the soil is your basic natural resource; that the soil is the source of all your income; that any investment of capital or labor which you place in your soil to build up and preserve its fertility, makes your equity in the land that much more valuable, and that effective erosion control requires a knowledge of and an interest in good farming practices.

2. Plan the farm so that the steeper slopes may be maintained in crops other than corn or cotton. These steeper slopes, if kept in clean tilled crops, will soon become so badly eroded that in time they will have to be abandoned. Retire such lands to forest, pasture, kudzu, or hay crops. Such a program for the steeper slopes will reduce erosion to a minimum and will prove more profitable.

3. Adopt an efficient system of soil and crop management to build up and maintain a high state of fertility. The continuous growing of cultivated crops, without turning under green manure, gradually depletes the soil of its humus. This increases the susceptibility of the soil to erosion. Humus makes the soil more porous and absorptive for rainfall, and by causing granulation of the soil helps to resist the erosive action of running water.

Each farmer cooperating with the Service should, with the assistance of the local technical staff, work out for his farm a rotation that will include both summer and winter legumes. These crops when turned under not only will help to hold your soils, but will increase yield of cotton, corn and other crops. Rotations should also contain a much larger acreage of oats, rye, and other small grains, than has generally been grown in the community.

4. Plan a satisfactory terracing program on the cultivated fields. Whenever sloping land is cultivated, erosion takes place. This is true to a certain extent even under the best possible cropping plan. Good crop rotations on sloping fields should have the support of adequate terraces. It should be remembered though that neither a good crop rotation alone nor terraces alone are sufficient to completely stop soil washing. Build good terraces and use good farming methods between terraces.

5. Practice strip cropping on most cultivated fields. Strip cropping consists of seeding the regular farm crops in long bands or strips laid out on the contour and so arranged that adjacent strips will not be plowed at the same time. These strips may consist of such close-growing crops as oats, wheat, rye, barley, lespedeza, sudan grass, or other hay crops alternated with the regular farm crops. Experimental data available from the erosion experiment stations show that strip cropping materially reduces soil erosion.

6. Do not burn woods and litter. The general practice of burning over the woods each year and raking and burning corn stalks, cotton stalks and other litter on the farm is a very unsound and destructive practice. This practice not only causes greater soil losses from erosion, but it destroys thousands of dollars worth of timber and plant food each year. Fire can destroy within a few hours that which nature has been years building. Be careful with fire.

7. Practice gully control at all times. Many fertile fields have been ruined by gullies that have been permitted to grow undisturbed until they have become so enormous and deep as to make control measures most difficult. Gullies can ruin a field within a few years. Watch out for the appearance of these gullies and stop them before they get beyond control.

LESPEDeza FOR SOIL BUILDING AND EROSION CONTROL. -- Lespedeza, both the annual varieties and sericea, will be given an important place in the erosion control program planned for the Cannonville area. This crop has a number of definite characteristics which adapt it to soil conservation and improvement.

The value of this crop is clearly shown by experiments conducted in North Carolina and Tennessee and reported in U. S. Department of Agriculture, Farmers Bulletin 1724. In this experiment cotton yields following good growths of lespedeza averaged 317 pounds per acre higher than cotton yields on land on which no lespedeza had been grown.

Lespedeza produces a thick mat of stems and leaves, which covers the land thoroughly, and thus prevents erosion almost entirely. This cover, if undisturbed, will last throughout the winter and give the soil excellent protection at a time when erosion is most likely to occur. On a number of farms in the project area the stubble of last year's lespedeza may be seen doing a good job of erosion control.

Preparation of the land is unnecessary for a good growth of lespedeza. Covering the seed is also unnecessary if there is a good cover of litter on the land. Where the litter is insufficient the seed should be covered by scratching the land with a drag harrow or similar implement. The usual rate of seeding is 25 pounds per acre.

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THE TERRACING PROGRAM. --- To demonstrate the proper construction of terraces the Service will construct one-half the terraces on the farms under agreement. This service should stimulate the farmer cooperators to exert greater efforts to plan and put into effect an improved soil conserving and erosion control program.

We insist that the cooperators permit our engineers to plan their terracing systems. The specifications are based on the best experimental data available and on sound engineering principles and practices. To increase the terrace interval, or give the terraces more fall, or build narrow-base structures, (as a few farmers have asked us to do) is to lessen the effectiveness of the whole system.

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DO NOT BURN WOODS. - - You should make every effort to prevent fires from burning over wooded areas or lands that will reseed naturally to forest growth. Practically all of the forest land in the project area has an insufficient number of established trees, and the prevention of fires will insure a full reseeding of trees on these areas. Forest land properly managed and protected from fires will grow from one to one and one-half cords of wood per acre per year, but if burned annually will produce only a fraction of this amount, because the fires destroy practically all the young trees and the partial stand of the remaining trees are left in a weakened condition.

Most of the fires in this section are caused by carelessness in burning fields and terraces prior to plowing. Practically all the fires could be prevented if the farmers would plow a few furrows between the woods and the fields before the latter are burned off.

Realizing that the prevalence of forest fires in the past has greatly reduced the farmer's income from his wooded lands, the Soil Conservation Service is making an effort to reduce the number of fires on the project area. The cooperation of all the people living in the area is necessary if success is to be attained in the prevention and suppression of forest fires.

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SUMMARY OF ACTIVITIES TO MARCH 15, 1936. - - Location: The Cannonville area lies between LaGrange and West Point, Georgia, and is bounded on the west by the Chattahoochee River, on the north by the Atlanta, Birmingham & Atlantic Railroad, and on the east and southeast by the Atlanta & West Point Railroad.

Size: The project covers an area of approximately 28,975 acres. Work was actually begun on the project September 15, 1935.

Erosion surveys have been completed on 114 farms, including a total of 13,363 acres. Forty farms, containing a total of 4,959 acres, have been placed under cooperative agreements.

ENGINEERING:

Number of wire dams	2,849		
Loose rock dams	124		
Brush dams	2,625		
Masonry dams	1		
Concrete spreaders	173		
Outlet channels	5,990	linear ft.	
Terrace lines surveyed	173,350	"	"
Terraces constructed	41,700	"	"
Diversion ditches	900	"	"

FORESTRY:

Tree seedlings planted	477,253
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KUDZU:

Number of crowns dug	83,526
Number of crowns planted	74,660
Acres planted	41

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Soil Conservation Service
LaGrange, Georgia

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AND

MAKE THE BAD SOIL BETTER